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REMARKS/ARGUMENTS

Subsequent to the Office Action issued on 10 January 2006, claims 1-13 and 23-27 are pending in the Application. Claims 1, 14 – 22 have been previously cancelled. Claims 2-13 and 23-27 remain in consideration.

Allowable Subject Matter

Examiner stated that claims 23-27 were allowable. Inventors express appreciation for this acknowledgment of patentable subject matter.

Claim Rejections – 35 U.S.C. § 103(a)

Claims 2-8 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Abe*, et al. '637, in view of *Urban* '440 and *Frank* '534.

Independent claim 7 sets forth a method of providing a silent mode of operation for a hybrid electric vehicle having a rechargeable energy storage system (ESS), comprising, *inter alia*, the steps of: (1) transmitting a silent mode initiation request to a silent mode controller; (2) comparing an actual value of at least one state parameter of the ESS that is indicative of the availability of the ESS for implementing the silent mode; (3) transmitting a silent mode activation request to the silent mode controller; (4) operating the vehicle in the silent mode using the silent mode controller, comprising designating an electric drive motor as a primary source of propulsion energy for the vehicle and designating an engine as a secondary source of the propulsion energy for the vehicle, wherein a modal quantity of energy in the ESS is allocated for use by the electric drive motor during the silent mode and the engine is used to make up the difference between the modal quantity of energy and a total vehicle propulsion energy requirement during the silent mode; (4A) limiting an output power of the engine while the vehicle is in the silent mode to a silent mode output power limit that is less than a maximum output power of the engine, and, (5) terminating the silent mode in response to the occurrence of a mode termination event.

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The United States Court of Appeals for the Federal Circuit (CAFC) has stated in determining the propriety of a rejection under 35 U.S.C. § 103, it is well settled that the obviousness of an invention cannot be established by combining the teachings of the prior art absent some teaching, suggestion or incentive supporting the combination. See In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 227 U.S.P.Q. 657 (Fed. Cir. 1985); ACS Hospital Systems, Inc. v. Montefiore Hospital, 732 F.2d 1572, 221 U.S.P.Q. 929 (Fed. Cir. 1984). The law followed by our court of review and the Board of Patent Appeals and Interferences is that “[a] prima facie case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art.” In re Rinehart, 531 F.2d 1048, 1051, 189 U.S.P.Q. 143, 147 (C.C.P.A. 1976). See also In re Lalu, 747 F.2d 703, 705, 223 U.S.P.Q. 1257, 1258 (Fed. Cir. 1984) (“In determining whether a case of prima facie obviousness exists, it is necessary to ascertain whether the prior art teachings would appear to be sufficient to one of ordinary skill in the art to suggest making the claimed substitution or other modification.”)

In light of the foregoing statement of the law, applicants respectfully traverse the rejection of Claim 7 as being unpatentable over *Abe*, et al. ‘637, in view of *Urban* ‘440 and *Frank* ‘534, because all elements of the invention are not disclosed in the prior art. Independent claim 7 sets forth a method of providing a silent mode of operation for a hybrid electric vehicle having a rechargeable energy storage system (ESS). Specifically, *Abe*, et al. ‘637, *Urban* ‘440, and *Frank* ‘534 fail to teach or disclose at least the following elements of Claim 7, including: providing a silent mode of operation for a hybrid electric vehicle, comprising, *inter alia*:

- (1) transmitting a silent mode initiation request to a silent mode controller;
- (4) operating the vehicle in the silent mode using the silent mode controller, comprising designating an electric drive motor as a primary source of

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propulsion energy for the vehicle and designating an engine as a secondary source of the propulsion energy for the vehicle, and

(4A) limiting an output power of the engine while the vehicle is in the silent mode.

The silent mode of operation is defined in the specification at paragraph 0044 "as a complementary series of software control functions or instructions in a silent mode controller 125 such as VCM15, TCM 17, or one of the other controllers described above, that allow the vehicle to operate with reduced noise and emissions where specifically needed, while phasing-in engine power as necessary and subject to certain constraints."

In contradistinction to the instant invention, *Abe*, et al. '637 at Col. 6, Lines 52, et seq. teaches a hybrid vehicle including an EV running permission flag, which facilitates an EV ('electric vehicle') running area. In HEV running, to increase power generation amount of the generator, the engine rotation speed and generator rotation speed may be increased or the load of the generator may be increased. The method which gives higher engine efficiency is chosen. *See* Col. 8, Lines 22, et seq.

In contradistinction to the instant invention, *Urban* '440 teaches an energy distribution method for a hybrid electric vehicle that includes operation in a zero emissions mode (*See* Col. 6, Lines 50 et seq.), operation utilizing only the power of internal combustion engine 30 (*See, e.g.* Col. 5, Lines 29 et seq.), and operation at times when the engine is used solely to accelerate the vehicle to cruising speed, the electrical motors 32 and 34 can be used for rapid acceleration or hill climbing. *See, e.g.* Col. 4, Lines 32 et seq.

In contradistinction to the instant invention, *Frank* '534 teaches a charge depletion control method and apparatus for hybrid powered vehicles that includes operation in a ZEV mode with the EM ('electric motor') turned on and the internal combustion engine turned off, and, a HEV mode with the internal combustion engine coupled and turned on, with the EM being used only for

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accelerating, climbing hills, and regenerative braking. *See* Col. 7, Lines 41-48. Once the internal combustion engine is operating, the EM is available for supplemental use. *See* Col. 7, Lines 26-27.

Applicants respectfully assert that the cited prior art, either individually or taken together, does not anticipate the instant invention of Claim 7 because they neither teach nor describe designating an electric drive motor as a primary source of propulsion energy for the vehicle and designating an engine as a secondary source of the propulsion energy for the vehicle, and (4A) limiting an output power of the engine while the vehicle is in the silent mode.

Therefore, independent claim 7 is allowable over the cited art, and reconsideration is respectfully requested. Claims 2-6 and 8-13 each ultimately depend from now allowable claim 7, and are likewise allowable.

Conclusion

Based upon all of the above, it is respectfully submitted that pending claims 2-13 and 23-27 are in condition for allowance and that same be allowed to proceed to issue. If the Examiner has any questions regarding the contents of the present response, Applicants' attorney may be contacted at the phone number appearing below during normal business hours.

Respectfully submitted,



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